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HIGH DEFINITION SOLUTIONS

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In Awe(dio) of Stardraw Control

Installer of high-end residential systems talks about his first use of Stardraw Control to create an integrated control system

Femi Adegoke of Awedio, based in the beautiful Southern Californian city of Thousand Oaks, was one of the very first systems integrators to devise and implement a system entirely controlled by Stardraw.com's revolutionary control software, the aptly named Stardraw Control. Adegoke, who specializes in high-end custom installations for the residential market, was an early adopter of the new technology and had successfully deployed a system within weeks of Stardraw Control's launch.

For the uninitiated, Stardraw Control generates standalone programs that can manage any remotely controllable equipment from any manufacturer using any protocol. It allows for the creation of customized Graphical User Interfaces (GUIs) that can be programmed to monitor or initiate any event without the programmer having to write a single line of code. What sets it apart from other control solutions is that instead of being locked into closed architectures wherever system control, monitoring or signal routing has been required, Stardraw Control offers systems integrators an open, software-based, unified control framework that can manage an entire system with a single application, regardless of system complexity.

"It was exactly what I was looking for," remarked Adegoke. "It's non-proprietary, which means that I can specify whatever equipment I like from any manufacturer. I don't have to say no to a client if there's something particular he or she wants, and I

can even incorporate existing equipment; it's totally flexible. The same goes for the device running the control program. As long as it's a PC-like device running Windows I can use whatever I like, which means the client can have the GUI on his personal laptop if he wants, or an Ultra-Mobile PC (UMPC), or any other computer throughout the house. When you compare this to, say, Crestron or AMX who oblige you use their own touchpanels which then need to be programmed by a trained programmer, the benefits become clear. As far as I can see, you don't get any more functionality with the traditional solutions, but you get a much higher price tag!"

The system that Awedio has installed is a \$35,000 project in a private home in the Thousand Oaks area. "The owner is a real hi-tech gadget freak and loved the idea of a

"I don't have to say no to a client if there's something particular he or she wants, and I can even incorporate existing equipment"

totally networked environment that would allow him to control anything from anywhere, so that's what we did," commented Adegoke. A key consideration was that the house, a former show home,

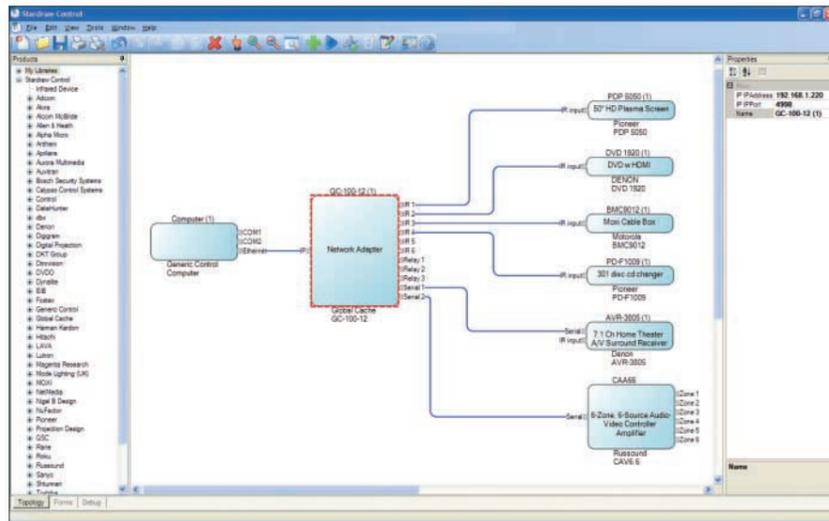
had been pre-wired and installed with speakers, but no provision had been made for wired control points.

The client wanted the sort of functionality normally associated with a hard-wired system, but without the disruption that installation of new cabling would have required. "Stardraw Control was the answer" said Adegoke, "because we could use control panels that talk to the network over WiFi, but control and monitor equipment over RS232 which provides control and feedback to the network".

The system includes a sophisticated distribution system that delivers separately controllable audio to each of six zones throughout the house, namely Front Hallway/Entryway, Kitchen, Master Bedroom, Master Bathroom, 1st Floor Hallway and

Outside. The main video display components are two 50-inch plasma screens, one in the master bedroom/lounge, the other in the downstairs movie theatre. The theater area also houses the Russound CAA66 Multiroom Amplifier and source devices including a

Motorola Moxi digital media cable box, a Denon DVD-A/SACD player and a Pioneer 301 Disc CD Changer, while 7.1 surround sound for the authentic movie experience is delivered through a Denon AV receiver/amp.



Stardraw Control Topology View showing logical interconnections for the system

To create his software-based control system, Adegoko first laid out the logical interconnections between devices using Stardraw Control's drag/drop Topology View. In addition to the devices being controlled, the Topology View includes GUI host devices, in this case a TabletKiosk Sahara Slate PC, and any routers/adapters needed to communicate between the PC and the products being controlled using whatever protocols are required. For this system Awedio used a Global Caché GC-100; an Ethernet-enabled adapter with serial and infra-red outputs, plus D-Link Wireless Access Point and Router.

Once the Topological Layout was completed – a task of a few minutes – Adegoko created a graphically rich user interface in Stardraw Control's Forms View. Using drag and drop to position Controls, including Graphic Buttons that can utilize any bitmap image, a Web Browser, Video Window and Clock, to name but a few, he was able to create a GUI that delighted his client.

“This is a really nice wireless device with a 12.1" touchscreen. It boots up into the control program so my client isn't even aware that he's using a Windows PC”

“Every customer is different” said Adegoko, “and each wants an experience that appeals uniquely to them. In this case the client loved the fact that the opening panel displays the current time – it sounds silly, but it meant he

didn't have to buy a clock for his theater – as well as the day's weather report, which is provided by an Internet weather service. Overall the GUI layout is highly intuitive and navigable so my client's family has no problem using it either.”



Stardraw Control Forms View showing CD UI Form

Programming the system was also a relatively simple matter since actions are defined using a context-sensitive menu system. This means that the whole system could be programmed without having to write any code. “This was a real plus,” Adegoko explained “because, to be honest, I am not a computer science graduate and the thought of having to write code is a bit daunting. Fortunately with Stardraw Control I can program the system very simply: just doubleclick on a button in the Forms View, select a product from a popup menu then select the function you want from a popup sub-menu. Now, if someone

clicks that button, the DVD will Play. That's all there is to it! When I need to do more complex things like monitor when someone manually changes the volume in a zone then update the GUI remotely to show the new



User Interface – Home

volume, it's still just two mouse clicks. Amazing! That's what I call programming!”. Behind the apparent simplicity, Stardraw Control also supports very sophisticated functions, chained actions, conditions, variables and a full scripting interface (for computer science graduates that do like to write C# code).

When the control project was complete, clicking a button compiled the GUI and its underlying logic as a standalone .EXE file that could then be copied to the master control unit – a TabletKiosk Sahara Slate PC. Adegoko remarked “This is a really nice wireless device with a 12.1" touchscreen. It boots up into the control program so my client isn't even aware that he's using a Windows PC – it behaves like a dedicated touchpanel but it's much more powerful and much, much cheaper than a proprietary product.”

The master control unit, although wireless, is generally located in the downstairs theater and bar area. However, thanks to Stardraw Control's client/server capabilities it is possible to have as many control units as you like. In this instance, Adegoko has made use of the three other computers in the house, (two laptops and a desktop PC), all of which are on the network and also run the GUI generated by Stardraw Control. “This means that the client has no less than four locations from which he can control his system,” explained Adegoko. “Using your zone and source selection tools, any zone can listen to any source at any time. You can also control level, balance, EQ etc. Each station also has internet access via the User Interface, so you can check email or surf the net, all without having to come out of Stardraw Control. It's very cool.”



Adegoko also pointed out that using Stardraw Control enables him to take advantage of the advanced command and monitoring functionality offered by RS232. “I've used serial in preference to infra-red wherever possible because IR is uni-directional, whereas RS232 is bi-directional. This means that all

the kitchen, the adjustments will update in real time on all the GUIs throughout the house. I've also set the system up so that each room returns to a default volume level when the room is switched on (it avoids the bleeding ears syndrome when your teenaged kids have been in there the day before!) You

can only achieve this with RS232 - you couldn't do it with IR - which brings me to another big plus point in favor of using Stardraw Control: I can use whatever protocol I please, therefore whatever is best suited to my particular needs.”

“I can program the system very simply: just doubleclick on a button in the Forms View, select a product from a popup menu then select the function you want from a popup sub-menu. That's all there is to it!”

equipment that is capable of providing feedback will update the GUI automatically whenever the device is adjusted manually.

It also means that whenever adjustments are made to the system from any location, including from one keypad that is located in



TabletKiosk Sahara Slate PC

When asked if there had been any downsides during his experience of using Stardraw Control Adegoke remarked, "Well, when I began the project Stardraw Control had been launched literally that week and I found that drivers were not yet available for some of the products I wanted to control. But the guys at Stardraw.com were really helpful and they added everything I needed incredibly quickly. They gave me a lot of support as I was learning the ropes and even connected to my system to help debug the project and new

drivers as they were in development. In fact, some of my suggestions for new features have already been added to Stardraw Control, so it's been a lot like having my own development team."

"I guess the real advantage of Stardraw Control is that it allows me to offer options," concluded Adegoke. "For any particular system I can start out small and get bigger at any time. I can add more touch panels any time I like because there's nothing more to program. All I have to do is

copy the control program executable onto the new machine, and that's it. What's more, even if the client decides that he wants to incorporate new equipment into his system, it's still not the end of the world. I'd need to tweak the project and generate a new .EXE file to incorporate the new gear, but it can all be done in no time at all and remains an extremely cost-effective option, particularly when you consider the alternatives. I'm a great fan and plan on using Stardraw Control wherever possible in my future installations."

Equipment List

Movie Theater

- 1x Pioneer PDP-5050HD 50" Plasma Display
- 1x Denon DVD 1920 DVD-A/SACD Progressive Scan Universal DVD Player
- 1x Motorola MOXI BMC9012 Broadband Media Center
- 1x Pioneer PD-F1009 301 Disc CD Changer
- 1x Denon AVR 3805 7.1 Home Theater AV Surround Receiver
- 3x MTX HT825AC 8" Angled In-Ceiling Speaker (L/C/R)
- 4x MTX HT825C 8" 2-Way Round In-Ceiling speaker (Surrounds)
- 1x Panamax MAX 5300 EX Power Conditioner
- 1x Jamo D6 SUB 15" Subwoofer
- 1x Russound CAA66 Multiroom Audio Controller Amplifier
- 1x Global Cache GC100-12 Network Adapter
- 1x DLink DI-634 Router
- 1x DLink DWL-2100AP Wireless Access Point
- 1x TabletKiosk Sahara Slate PC

Master Bedroom/Lounge

- 1x Pioneer PDP 504CMX 50" Plasma Display
- 1x Denon AVR 1705 6.1 CH Home Theater AV Receiver
- 1x Motorola MOXI BMC9012 Broadband Media Center
- 1x Denon DVD 1920 DVD-A/SACD Progressive Scan Universal DVD Player
- 1x Panamax MAX 4300 EX Power Conditioner
- 2x MTX HT825C 8" 2-Way Round In-Ceiling speaker

Master Bathroom

- 1x MTX HT822C 8" 2-Way Round In-Ceiling speaker

1st Floor Hallway

- 1x MTX HT822C 8" 2-Way Round In-Ceiling speaker

Kitchen

- 2x MTX HT825C 6½" 2-Way Round In-Ceiling speaker
- 1x Russound KPL Keypad

Front Entry/Hallway

- 2x MTX HT825C 8" 2-Way Round In-Ceiling speaker

Outside:

- 2x MTX AW52W 5¼" All Weather Speaker

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PLASA
AWARDS FOR INNOVATION**



System User Interface



Home



Moxi



Audio



Favorites



CD

UI Design/Layout by Femi Adegoke,
Awedio

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